

SHORT COMMUNICATION

Notes on two problematic eastern Asian species of the spider genus *Oecobius* (Araneae, Oecobiidae, Linyphiidae)

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Abstract. We address the current taxonomic status of two problematic Eastern Asian species of *Oecobius* Lucas 1846 and propose nomenclatural changes in view of the information currently available. *Oecobius formosensis* (Kishida 1943) is considered unrecognizable and proposed as a *nomen dubium*. Two synanthropic species, *Oecobius navus* Lucas 1859 and *Oecobius concinnus* Simon 1893, are newly recorded for Taiwan. Evidence from the literature indicating that a third species (*Oecobius marathans* Tikader 1962) also occurs in that country is provided. *Oecobius sapporensis* Saito 1934 is transferred to the genus *Nerienne* Blackwall 1833 (Linyphiidae) based on its original description and illustrations.

Keywords: Taxonomy, Oriental region, Eresoidea, Linyphiidae, Taiwan

The spider family Oecobiidae has a worldwide distribution and is represented in several countries both by native and some cosmopolitan and synanthropic species (Santos & Gonzaga 2003; Platnick 2008). Despite its ubiquity, this family is still in need of revision in several biogeographic regions, with a few exceptions like the Americas (Shear 1970; Santos & Gonzaga 2003) and parts of the Afrotropical region (Shear & Benoit 1974; Rheims et al. 2007). Nine species are known in Eastern Asia, although this figure probably underestimates the true species richness given that the fauna of that region is poorly studied. The literature on Asian oecobiids is relatively rich, including some short taxonomic studies that allow the identification of common species in the region (Kim & Lee 1998; Song et al. 1999). However, at least two Asian species of the genus *Oecobius* Lucas 1846 are particularly problematic since the type material of both species is lost. The first of them, *Oecobius formosensis* (Kishida 1943), has been illustrated and recorded twice for Taiwan (Kayashima 1943; Lee 1966) but is insufficiently known mainly due to the scarcity of good illustrations. The second, *Oecobius sapporensis* Saito 1934, was described based on a female specimen from northern Japan and is represented in the literature by good illustrations (see Saito 1934), which is interesting since these illustrations clearly and unmistakably suggest that *O. sapporensis* is not a member of the family Oecobiidae. This problem was already noticed by some authors (Shear 1970; Yaginuma 1977), but a solution has never been proposed possibly because, as mentioned above, no specimens are available for study. In this note we discuss the situation of these problematic Asian species and propose nomenclatural solutions given the information currently available. Additionally, three worldwide species of *Oecobius* are here recorded for the first time in Taiwan, based on new specimens examined and on published evidence. The material examined for this study is deposited in Instituto Butantan, São Paulo (IBSP, A.D. Brescovit, curator) and National Science Museum, Tokyo (NSMT, H. Ono, curator).

Family Oecobiidae Blackwall 1862
Oecobius formosensis (Kishida 1943)

Phanerecobius formosensis Kishida, in Kayashima 1943:16, pl. 8, fig. 2.
Oecobius formosensis, Lee 1966:18, figs. 3a–d.

Type material.—TAIWAN: T'ai-nan, K. Kishida coll., one specimen (adult female or juvenile, not specified), deposited in the collector's personal collection, currently lost.

Remarks.—The original description of this species provides no characters for its proper identification. The only illustration available for the type specimen, showing a dorsal habitus, is extremely reduced in size. This figure depicts what is most probably an oecobiid specimen, but the figure is poor in details. Lee (1966) described and illustrated the male, but no justification is presented that assures that it is conspecific with the specimens studied by Kishida (1943). It is not clear whether the specimen he studied came from the type locality, since the collection locality of the male specimen is not specified. Lee (1966), however, states that the species is widely distributed throughout Taiwan. Lee's description was certainly not based on the examination of the type material, since it was never deposited in any institution and is currently considered lost as is most of the material studied by K. Kishida (Ono 2005; H. Ono personal communication). The illustration of the male pedipalp presented by Lee (1966:fig. 3d), although depicted in an unusual ventral-retrolateral view, clearly suggests it is conspecific with *Oecobius marathans* Tikader 1962. This conclusion is supported by the presence of two diagnostic characters of *O. marathans* in Lee's (1966) figure: a pointed lobe (OTL1) situated on a basal tegular projection and a sinuous prolateral sclerite on the tegulum (see Santos & Gonzaga 2003:9, figs. 14, 15). It could be reasonable to consider *O. formosensis* as a senior synonym of *O. marathans*, but two other *Oecobius* species are here recorded from Taiwan (see below). It is possible that Kishida (1943) studied one of these species, since he states that the type specimen was collected in a house in southern Taiwan. These three species (*O. concinnus* Simon 1893, *O. marathans*, and *O. navus* Blackwall 1859) are synanthropic and cosmopolitan (Platnick 2008) and can be distinguished by the color pattern of the carapace, as shown by Santos & Gonzaga (2003). However this would not be possible in this case due to the extreme reduction of the original illustration. It is possible to assure that the male illustrated by Lee (1966) is *O. marathans* but there is no evidence that it is conspecific with the specimen originally studied by Kishida, whose illustrations are too small to distinguish details of coloration. In light of these problems, we propose *Oecobius formosensis* as a *nomen dubium*.

Oecobius navus Blackwall 1859

Oecobius navus Blackwall 1859:266 (for additional published records and synonyms, see Platnick 2008).

Material examined.—TAIWAN: T'ai-chung, Tunghai University Campus (24°10'N, 120°35'E), Chou I-Chia coll., 20.IV.2002, 1♂ 1♀ (IBSP 34955); *ibid.*, 10.IV.2002, 6♀ 1 juv. (IBSP 34954).

Oecobius concinnus Simon 1893

Oecobius concinnus Simon 1893:435, pl. 9, fig. 2 (for additional published records and synonyms, see Platnick 2008).

Material examined.—TAIWAN: T'ai-chung, Tunghai University Campus (24°10'N 120°35'E), Chou I-Chia coll., 20.IV.2002, 1♀ (IBSP 34956).

Oecobius marathaus Tikader 1962

Oecobius marathaus Tikader 1962:684–685, fig. 2 (for additional published records and synonyms, see Platnick 2008).

Remarks.—Although we have not seen any specimen of this species from Taiwan, a male was recorded in that country by Lee (1966), who considered it as the male of *Oecobius formosensis* (see discussion above).

Family Linyphiidae Blackwall 1859

Neriene sapporensis (Saito 1934) new combination

Oecobius sapporensis Saito 1934:271, pl. 12, figs. 1a–b, pl. 14, figs. 33a–b. Saito 1959:34, fig. 7a–d; Kritscher 1966: 293, fig. 16.

Type material.—JAPAN: *Hokkaido*: Sapporo, 13.IX.1930, S. Saito coll., 1♀, deposited in the collector's personal collection, currently lost.

Remarks.—Although this species has been maintained in Oecobiidae since its description, the original illustrations of dorsal and lateral views of the habitus and of the eye region (Saito 1934:figs. 1a–b, 33a) clearly show it is misplaced in this family (see comments in Shear 1970; Yaginuma 1977). The illustration of the epigynum (Saito 1934: fig. 33b; reproduced from the original by Kritscher 1966) includes a pair of lateral atria separated by a median, posteriorly projected septum. As with other spider species described by Saito (1934), the type material is probably lost (H. Ono personal communication). Thus, the original illustrations and description are currently the only source of information about this species. Judging by body shape, color pattern, and epigynum structure, this species seems similar to *Neriene nigripectoris* (Oi 1960), a linyphiid widely distributed from Russia to Eastern Asia, including Japan (Oi 1960:227, figs. 330–332; Shinkai & Takano 1984: 24; Chikuni 1989: 50). It is reasonable to consider *O. sapporensis* as a senior synonym of *N. nigripectoris*, given their similarity and that the type locality of the former is well within the distribution range of the latter. However, since the type specimen of *O. sapporensis* is relatively small (although within the range of variation of *N. nigripectoris*) and has a pair of dark lateral bands on the carapace (which is not known for *N. nigripectoris*), we prefer to keep it as valid a species. The real identity of *N. sapporensis* could be determined with future collections from the type locality.

Material examined.—*Neriene nigripectoris* (Oi 1960): JAPAN: *Miyagi-ken*: Sendai-Shi (38°15'N, 140°53'E), Dainohara Shinrin-Koen, 12.VIII.1981, K. Sasabi coll., H. Ono det., 2♂ 3♀ (NSMT-Ar. 503).

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